In the Claims:

Please amend the claims as set forth in the following Listing of the Claims.

LISTING OF THE CLAIMS

1. (Withdrawn) A method of assaying for the equilibrium interaction of a probe and an unknown target, said method comprising:

exciting a sample at with radiation, said sample comprising

at least a portion of the members of a library,

at least one probe, and

at least one fluorescent tag;

measuring the fluorescence from a subvolume of said sample; and

analyzing the fluctuations of said fluorescence.

2. (Withdrawn) The method of claim 1 further comprising

selecting additional portions of said library,

sequentially exciting an additional portion of said library with radiation;

measuring the fluorescence of a subvolume of the additional portion; and

analyzing the fluctuations of said fluorescence.

3. (Withdrawn) The method of claim 1, said sample comprises a plurality of fluorescent tags, said fluorescent tags being attached to said members.

4. (Withdrawn) The method of claim 1 further comprising separating at least one of the members of said portion of said library from at least one other member of said portion of said library, and repeating the method of claim 1 on said at least one separated member.

5. (Withdrawn) The method of claim 1, wherein said members comprise said fluorescent tag.

6. (Withdrawn) The method of claim 1, wherein said fluorescent tag is attached to said probe.

7. (Withdrawn) The method of claim 1, further comprising generating a library.

8. (Withdrawn) The method of claim 1, further comprising generating a library comprising fluorescent members.

9. (Withdrawn) The method of claim 8, wherein said generating comprises in vitro translation.

10. (Withdrawn) The method of claim 1, further comprising labeling said members of said library with a fluorophore.

11. (Withdrawn) The method of claim 10, wherein said labeling comprises in vitro translation labeling using a fluorescent amino acid analogue, labeling by inserting a sequence for a fluorescent protein into a cDNA or post translational labeling.

12. (Withdrawn) The method of claim 1, wherein said members of said library comprise fluorescent proteins.

13. (Withdrawn) The method of claim 1, wherein said members of said library comprise fluorescently tagged amino acids.

14. (Withdrawn) The method of claim 1, wherein said members of said library comprise fluorescently labeled peptides.

15. (Withdrawn) The method of claim 1, wherein said sample comprises a plurality of unique probes, each unique probe comprising a unique fluorescent tag, each unique probe having a unique binding site.

23. (Withdrawn) The method of claim 19, wherein said unique site is created by proteolysis.

24. (Withdrawn) The method of claim 19, wherein said unique site is selected from the group consisting of a phosphotyrosine, phosphoserine, or a combination thereof.

25. (Withdrawn) The method of claim 1, wherein said members comprise a binding site created by at least one of phosphorylation, glycosylation, proteolysis, and ubiquitination.

26. (Withdrawn) The method of claim 1, wherein at least one of said probe and said member is attached to a bead.

27. (Withdrawn) The method of claim 1, wherein said probe is attached to said bead and said fluorescent tag is attached to said member.

28. (Withdrawn) The method of claim 1, wherein said member is attached to said bead and said fluorescent tag is attached to said probe.

29. (Withdrawn) The method of claim 1, wherein said analyzing comprises determining at least one of the size of the fluorescence intensity fluctuations and the duration of the correlation of the fluorescence fluctuation.

30. (Withdrawn) The method of claim 1, wherein said analyzing comprises determining a correlation function comprising at least one of the crosscorrelation function of said sample and an autocorrelation function of said sample.

31. (Withdrawn) The method of claim 30, wherein said analyzing further comprises determining the decay time of the correlation function.

32. (Withdrawn) The method of claim 30, wherein said analyzing further comprises determining the time zero value of the correlation function.

33. (Withdrawn) The method of claim 1, wherein said analyzing comprises at least one of a moment analysis, Fourier transform analysis, and a power spectrum analysis.

34. (Withdrawn) The method of claim 1, wherein when binding is present, said method further comprising determining at least one of the diffusion coefficient of a probe-member complex, the number of probe-member complexes in the sample, and the stoichiometry of the probe-member complex.

35. (Withdrawn) The method of claim 1, wherein said sample further comprises a plurality of unique probes, wherein each unique probe comprises a unique fluorophore.

36. (Withdrawn) The method of claim 1, wherein said sample further comprises a plurality of different size beads, a plurality of probes and a plurality of members of said library, at least one of said probes and said members being attached to said beads.

37. (Withdrawn) The method of claim 35, wherein said members are attached to said beads and said probes comprise a fluorescent tag.

38. (Withdrawn) The method of claim 35, wherein said probes are attached to said beads and said members comprise a fluorescent tag.

39. (Withdrawn) The method of claim 1, wherein said sample further comprises a second fluorescent tag different from said first fluorescent tag.

40. (Withdrawn) The method of claim 38, wherein said first fluorescent tag is attached to said probe and said second fluorescent tag is attached to said member.

41. (Withdrawn) The method of claim 38, wherein said first fluorescent tag is attached to said first probe and said second fluorescent tag is attached to at least one of a second probe and a bead.

42. (Withdrawn) The method of claim 38, wherein said first fluorescent tag is attached to said member and said second fluorescent tag is attached to at least one of said probe and a bead.

43. (Withdrawn) The method of claim 38, wherein said sample further comprises a plurality of different size beads and at least one of said probe and said member is attached to said beads.

44. (Withdrawn) The method of claim 42, wherein said sample further comprises a plurality of unique probes, each unique probe being attached to a different